

## REMARKS

In response to a Restriction Requirement issued by the Examiner, Applicant elected to prosecute original Claims 1-25. Accordingly, Claims 26-36 have been withdrawn from consideration without prejudice toward filing a divisional application.

The Examiner has initially rejected Applicant's Claims 1-25 in the Office Action mailed July 5, 2006. Since this response is being submitted in timely fashion, no further fee is thought to be due at this time. If any additional fee is due for the continued prosecution of this application, please charge the same to Applicant's Deposit Account No. 50-2555 (Whitaker, Chalk, Swindle & Sawyer, LLP).

Claim 2 has been amended to remove the objection under 35 U.S.C. §112.

The Examiner substantively rejected Applicant's Claims 1-4, 10-17 and 23-25 under 35 U.S.C. § 103(a) as being unpatentable over *Richards et al.* (U.S. Patent No. 6,367,508), in view of *Johnson et al.* (U.S. Patent No. 5,452,749) and *Vincent* (U.S. Patent No. 5,303,743). Claims 5-9 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Richards et al.* in view of *Johnson et al.* and *Vincent* as applied to claims 1-4, 10-17 and 23-25, and further in view of *Gazda et al.* (U.S. Patent No. 4,928,761).

The Examiner argues that *Richards et al.* discloses or suggests the basic claimed thread protector structure for tubular goods having threaded ends including a polymeric body having cylindrical wall portions defining an interior space therewithin, and further having a transverse partition intermediate a first and second end of the interior space, wherein the cylindrical wall portions of the first end engage and enclose the threaded ends of the tubular goods (Office Action, page 2). However, the Examiner notes that *Richards et al.* fails to teach the inclusion of a weather O-ring seal in the thread protector structure, but argues that such is taught by *Johnson et al.* The Examiner also notes that while *Richards et al.* does not teach the aspect of providing a corrosion inhibiting compound impregnated into the polymeric body, that such is taught by *Vincent*. The Examiner is of the position that Applicant's use of a corrosion inhibiting compound, as originally claimed, is obvious from the teachings of *Vincent*.

However, even this combination of art would fail to teach Applicant's invention as defined in the amended claims. The *Richards et al.* reference cited by the Examiner merely shows one type of end cap for protecting the threads of tubular goods. However, the end cap of *Richards et al.* lacks key features of Applicant's claimed invention, namely the inclusion of a corrosion inhibitor in the material of the end cap itself and the presence of wiper blades and a vent hole. The *Johnson et al.* reference fails to remedy

these shortcoming in the teaching of *Richards et al.* The *Johnson et al.* reference teaches a seal in the form of an O-ring, that is positioned in the inner liner, and provides a seal at the interface of the pipe end and the plastic threaded sleeve near the open end of the end cap. *Johnson et al.* make no mention of wiper blade edges which are formed circumferentially around the weather ring, as presently claimed by Applicant. *Johnson et al.* also fails to include the presence of an air vent in order to allow air flow into or out of the sealed region of the tubular goods, as now claimed by Applicant in amended Claim 1. In fact, *Johnson et al.* teaches the use of a sealable thread protector end cap without any interior components necessary to equalize pressure inside the tubular goods which are comparable to Applicant's internal vent tube 47. *Richards et al.* similarly fails to teach the use of a vent or seal in the thread protector.

The teaching of *Vincent* also fails to arrive at Applicant's invention, even when combined with the teaching of the other references. *Vincent* differs from Applicant's presently claimed invention in that he teaches a method of providing a corrosion inhibitor that is a two step process: first the corrosion inhibitor is sprayed or coated to the end of the tubular good, and secondly a threaded cap is applied to the threads at the end of the tubular good. *Vincent* specifically teaches the production of a transparent thread protector in column 4 lines 20-33 as follows:

*According to this invention, pipe threads are protected from corrosion by applying to the threads an inhibitor, which will not conceal corrosion of the threads, i.e. the inhibitor is transparent to corrosion. Preferably, a transparent plastic thread protector, i.e. one which allows visual inspection of the threads with the protector installed, is then screwed onto the threads. With this combination of elements, the threads may be periodically inspected without removing the thread protectors to determine whether any corrosion has begun. Any corrosion will be visible through the transparent thread protector and the inhibitor coating, so it is not necessary to remove the inhibitor from the pipe threads to inspect them.*

This teaching would not make it "obvious" to include into the seal ring body itself a composition that would render the body opaque. It would thereby not be obvious for Applicant to include a corrosion inhibitor that is comprised of NaSul 729, which is a largely sulfonate percentage grease compound. By introducing this type grease compound into the body of the thread protector composition, the thread protector would effectively be transform from a transparent material to an opaque material, and thereby nullify the objective of providing a transparent thread protector to analyze corrosion of the tubular goods.

Since Applicant is not interested in producing a transparent thread protector, there is no need to first spray or coat a corrosion inhibitor but instead Applicant can permanently incorporate the corrosion inhibitor directly into the body of the end cap. This will have three main beneficial results in the production of a thread protector. First of all, incorporating the corrosion inhibitor provides a speedier and less messy process for providing protection for the threading on tubular goods, as opposed to spraying, drying, and then applying the thread protector to the tubular goods. Secondly, this process also increases the lifetime of the corrosion inhibitor by including it in the physical makeup of the thread protector rather than leaving it externally and exposed to natural elements with the possibility of the inhibitor evaporating or wiped away. *Vincent* acknowledges the likelihood of deterioration of the originally applied inhibitor in Col. 8, lines 5-7, and, in the preferred embodiment of the invention, provides a port 16 fitted with a grease fitting 18 through which additional corrosion inhibitor may be applied from time to time during storage. Applicant can effectively save time with the elimination of a need for inhibitor re-application, as well as providing a more economical use of the one-time application or incorporation of the corrosion inhibitor. Lastly, Applicant wishes to include the corrosion inhibitor in the physical makeup during the blending stage to ensure equal distribution of the inhibitor, as opposed to the likelihood of spot coverage occurring from machine or human distribution of inhibitor coating on the exterior only.

For generally the same reasons, the rejection of Claims 5-9 and 18-22 under 35 U.S.C. 103(a) as being unpatentable over *Richards et al.* in view of *Johnson et al.*, *Vincent* and *Gazda et al.* should similarly be withdrawn. *Johnson et al.* is cited as teaching a ring structure and also the need of providing a ring sealing structure, whereas *Gazda et al.* is cited as teaching the inclusion of a C-ring which acts as a vent. The Examiner argues that the C-ring edges contained on the wiper ring of *Gazda et al.* provide a similar structure to Applicant's and permit air flow.

However, *Gazda et al.* teaches an invention for use in a different environment than Applicant. The *Gazda et al.* teaching is directed to a wireline tool for use in plugging the flow conductor against flow from below as well as from above, and as such is intended for use downhole inside a well. Furthermore, *Gazda et al.* teach an invention containing a seal for use in a dynamic situation, with movable design parts that differ from the static setting of Applicant's invention. Lastly, one of the main focus points of the seal taught by *Gazda et al.* is its specific formation as a C-ring, with the provided gap acting to allow air travel and pressure equalization of the above and below portions of the well. *Gazda et al.* describe the preferred embodiment of the invention in column 12 lines 26-32:

*Near the upper end of enlarged portion, the stem is provided with a suitable external annular groove which is carried a wiper ring, such as a C-ring. This C-ring has a close*

*sliding fit with the inner wall of the mandrel bore, but since it has been cut to form a "C", it is provided with a gap. This gap is sufficiently narrow to prevent trash and most solid particles from entering the region therebelow, but is wide enough to prevent trapping pressure therebeneath.*

Applicant's amended claims define a seal structure that circumferentially covers the entirety of the inside of the tubular good, and does not include a gap to equalize air pressure. Instead, a vent is provided in a transverse partition of the polymer body for the equalization of air pressure, wherein the vent allows air pressure outside the tubular goods while limiting the passage of moisture therethrough. By eliminating the need to provide a gap in the sealing ring in order to avoid internal pressure hazards and instead introducing an air vent, Applicant has further decreased the possibility of the intrusion of water or moisture-laden air entering the tubular goods.

Based upon the above arguments and amendments, Claims 1-4, 6-17 and 20-25 are thought to be allowable over the art of record and an early notification of the same would be appreciated. If any additional fee is necessitated by this amendment, please charge the same to Applicant's Deposit Account No. 50-2555 (Whitaker, Chalk, Swindle & Sawyer, LLP).

Respectfully submitted,

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